

STRUCTURE SEARCH

=> d his 139

L39 (FILE 'HCAPLUS' ENTERED AT 15:37:20 ON 23 APR 2009)
27 S L35 AND (L37 OR L38)
SAV TEMP L39 PEZ397HCP/A

-> d que stat 139
L15 81738 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 100-42-5/CRN

L16 STR



NODE ATTRIBUTES:

NSPEC IS BC AT 2

NSPEC IS BC AT 4

NSPEC IS BC AT S

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

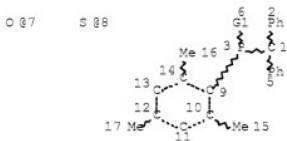
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L18 STR



VAR G1=7/8

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 7

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DEFAULT MLEVEL IS ATOM

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GRAPH ATTRIBUTES:

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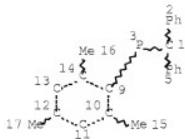
www.ijerph.org

STEREO ATTRIBUTES: NONE

L19 10854 SEA FILE=REGISTRY SSS FUL L16

L22 2 SEA FILE=REGISTRY SUB=L19 SSS FUL L18

L27 2 SEA



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ELEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

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L31      42 SEA FILE=REGISTRY SUB=L19 SSS FUL L29
L32      2 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L22 AND L19
L33      15 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L19 AND
          PMS/CI
L34      50 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L27 OR (L31
          OR L32 OR L33)
L35      40 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L34
L37      QUE SPE=ON ABB=ON PLU=ON PY=<2003 NOT P/DT
L38      QUE SPE=ON ABB=ON PLU=ON (PY=<2003 OR PRY=<2003 OR
          AX=<2003 OR MY=<2003 OR REVIEW/DT) AND P/DT
L39      27 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L35 AND (L37
          OR L38)
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STRUCTURE SEARCH RESULTS

> d 139 1-27 ibib ed abs hitstr hitind

L39 ANSWER 1 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2004:534258 HCPLUS Full-text
 DOCUMENT NUMBER: 1411:89559
 TITLE: Polymerization of phosphaalkenes
 INVENTOR(S): Gates, Derek; Tsang, Chu-win; Yam, Mandy
 PATENT ASSIGNEE(S): The University of British Columbia, Can.
 SOURCE: PCT Int. Appl., 42 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 2004055098	A2	20040701	WO 2003-CA1982	2003 1216 -----
WO 2004055098	A3	20040902		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GL, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2508979	A1	20040701	CA 2003-2508979	2003 1216 -----
AU 2003292925	A1	20040709	AU 2003-292925	2003 1216 -----
US 20060270805	A1	20061130	US 2006-539397	2006 0117 -----
PRIORITY APPLN. INFO.:			US 2002-433507P	P 2002 1216 -----
ED	Entered STN: 02 Jul 2004		WO 2003-CA1982	W 2003 1216 -----

AB Methods for polymerization of phosphaalkenes using initiators are provided. Also provided are polymers and copolymers in which the polymer backbone contains tracts of carbon and phosphorus atoms in approx. equimolar amts. C-P bonds in the polymers of this invention may be predominantly in a head-to-tail arrangement or mixed arrangements. Copolymers may comprise polyolefin monomer units. Thus, 20.0 g mesityl bis(trimethylsilyl)phosphine and 12.3 g benzophenone was reacted in the presence of anhydrous potassium hydroxide and distilled at 150-160° to give 12.0 g

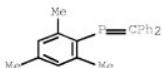
10/539,397-292586-EIC SEARCH

mesityl(diphenylmethylene)phosphine, 1.00 g of which was polymerized in the presence of 0.08 g VAZO 88 1,1'-azobis(cyclohexanecarbonitrile) at 200° for 48 h to give a copolymer with yield 16%.

IT 67565-91-7P, Phosphine,
(diphenylmethylene)(2,4,6-trimethylphenyl)-
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)
(monomer or optionally intermediate for initiator preparation;
polymerization of phosphaalkenes)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



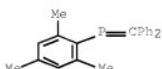
IT 501418-46-8P, Phosphine,
(diphenylmethylene)(2,4,6-trimethylphenyl)-, homopolymer
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)
(optionally intermediate; polymerization of phosphaalkenes)

RN 501418-46-8 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-,
homopolymer (CA INDEX NAME)

CM 1

CRN 67565-91-7
CMF C22 H21 P



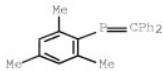
IT 501418-46-8DP, Phosphine,
(diphenylmethylene)(2,4,6-trimethylphenyl)-, homopolymer, modified
713542-93-9DP, oxidized 713542-95-1DP, oxidized
713542-97-3DP, oxidized 713542-99-5DP, oxidized
713543-00-1P 713543-01-2DP, oxidized
713543-02-3DP, oxidized 713543-03-4DP, oxidized
RL: IMF (Industrial manufacture); PREP (Preparation)
(polymerization of phosphaalkenes)

RN 501418-46-8 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-,
homopolymer (CA INDEX NAME)

CM 1

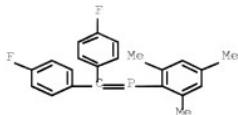
CRN 67565-91-7
CMF C22 H21 P



RN 713542-93-9 HCAPLUS
 CN Phosphine, [bis(4-fluorophenyl)methylene](2,4,6-trimethylphenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

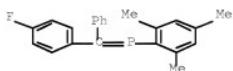
CRN 713542-92-8
 CMF C22 H19 F2 P



RN 713542-95-1 HCAPLUS
 CN Phosphine, [(4-fluorophenyl)phenylmethylene](2,4,6-trimethylphenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

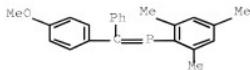
CRN 713542-94-0
 CMF C22 H20 F P



RN 713542-97-3 HCAPLUS
 CN Phosphine, [(4-methoxyphenyl)phenylmethylene](2,4,6-trimethylphenyl)-, homopolymer (CA INDEX NAME)

CM 1

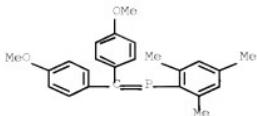
CRN 713542-96-2
 CMF C23 H23 O P



RN 713542-99-5 HCPLUS
 CN Phosphine, [bis(4-methoxyphenyl)methylene](2,4,6-trimethylphenyl)-
 , homopolymer (9CI) (CA INDEX NAME)

CM 1

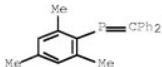
CRN 713542-98-4
 CMF C24 H25 O2 P



RN 713543-00-1 HCPLUS
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with
 (diphenylmethylene)(2,4,6-trimethylphenyl)phosphine (9CI) (CA
 INDEX NAME)

CM 1

CRN 67565-91-7
 CMF C22 H21 P



CM 2

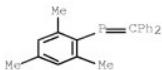
CRN 80-62-6
 CMF C5 H8 O2



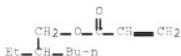
RN 713543-01-2 HCPLUS
 CN 2-Propenoic acid, 2-ethylhexyl ester, polymer with
 (diphenylmethylene)(2,4,6-trimethylphenyl)phosphine (9CI) (CA
 INDEX NAME)

CM 1

CRN 67565-91-7
 CMF C22 H21 P

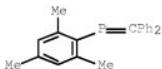


CM 2

CRN 103-11-7
CMF C11 H20 O2

RN 713543-02-3 HCPLUS
 CN 2-Propenoic acid, butyl ester, polymer with
 (diphenylmethylene)(2,4,6-trimethylphenyl)phosphine (9CI) (CA
 INDEX NAME)

CM 1

CRN 67565-91-7
CMF C22 H21 P

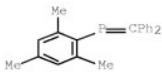
CM 2

CRN 141-32-2
CMF C7 H12 O2

RN 713543-03-4 HCPLUS
 CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-, polymer
 with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 67565-91-7
CMF C22 H21 P



CM 2

CRN 100-42-5
CMF C8 H8 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IC ICM C08G079-00
 CC 35-4 (Chemistry of Synthetic High Polymers)
 IT 67565-91-7P, Phosphine,
 (diphenylmethylene)(2,4,6-trimethylphenyl)-
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP
 (Preparation); RACT (Reactant or reagent)
 (monomer or optionally intermediate for initiator preparation;
 polymerization of phosphaalkenes)
 IT 501418-46-8P, Phosphine,
 (diphenylmethylene)(2,4,6-trimethylphenyl)-, homopolymer
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP
 (Preparation); RACT (Reactant or reagent)
 (optionally intermediate; polymerization of phosphaalkenes)
 IT 7722-84-1DP, Hydrogen peroxide, reaction products with
 polymethylenephosphine 10544-50-0DP, Octasulfur, reaction
 products with polymethylenephosphine, preparation 14044-65-6DP,
 Borane tetrahydrofuran, reaction products with
 polymethylenephosphine 334992-56-2DP, Methanol, trifluoro-,
 methanesulfonate, reaction products with polymethylenephosphine
 501418-46-8DP, Phosphine,
 (diphenylmethylene)(2,4,6-trimethylphenyl)-, homopolymer, modified
 713542-93-9DP, oxidized 713542-95-1DP, oxidized
 713542-97-3DP, oxidized 713542-99-5DP, oxidized
 713543-00-1P 713543-01-2DP, oxidized
 713543-02-3DP, oxidized 713543-03-4DP, oxidized
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (polymerization of phosphaalkenes)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE
 FOR THIS RECORD. ALL CITATIONS AVAILABLE
 IN THE REFORMAT

L39 ANSWER 2 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 2003:594444 HCPLUS [Full-text](#)
 DOCUMENT NUMBER: 139:365235
 TITLE: New functional inorganic polymers containing
 phosphorus
 AUTHOR(S): Gates, Derek P.; Tsang, Chi-Wing; Wright,
 Vincent A.; Yam, Mandy
 CORPORATE SOURCE: Department of Chemistry, University of British
 Columbia, Vancouver, BC, V6T 1Z1, Can.
 SOURCE: Macromolecular Symposia (2003),
 196(Metal- and Metalloid-Containing
 Macromolecules), 271-278
 CODEN: MSYMEC; ISSN: 1022-1360
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

ED Entered STN: 04 Aug 2003

AB A review describes the addition polymerization reaction as a general method for the polymerization of P=C bonds. The new macromol. is of moderate mol. weight (ca. 10⁴ g/mol) and the oxidized polymers are air-stable. Poly(p-phenylenephosphaalkene), the first π -conjugated polymer containing P=C bonds in the backbone, has been prepared. The UV/VIS spectrum of this polymer shows a red shift in λ_{max} when compared with mol. model systems.

IT 501418-46-8D, derivs.

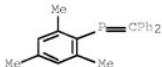
RL: MSC (Miscellaneous)

(new functional inorg. polymers containing phosphorus)

RN 501418-46-8 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-, homopolymer (CA INDEX NAME)

CM 1

CRN 67565-91-7
CMF C22 H21 P

CC 35-0 (Chemistry of Synthetic High Polymers)

IT 501418-46-8D, derivs.

RL: MSC (Miscellaneous)

(new functional inorg. polymers containing phosphorus)

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 3 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:45379 HCPLUS Full-text

DOCUMENT NUMBER: 138:238494

TITLE: The Addition Polymerization of a P:C Bond: A Route to New Phosphine Polymers

AUTHOR(S): Tsang, Chi-Wing; Yam, Mandy; Gates, Derek P.
CORPORATE SOURCE: Department of Chemistry, University of British Columbia, Vancouver, BC, V6T 1Z1, Can.SOURCE: Journal of the American Chemical Society (2003), 125(6), 1480-1481
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 21 Jan 2003

AB Addition polymerization, the most general method of preparation for organic polymers, has successfully been extended to P:C bonds. The polymerization of a phospha-alkene was initiated by thermolysis or with alkyllithium reagents. The unprecedented poly(methylenephosphine)s are easily oxidized using oxygen or sulfur to give air stable macromols. A mol. weight (Mw) of 35000 g/mol for the poly(methylenephosphine sulfide) was estimated by light-scattering GPC.

IT 67565-91-7P

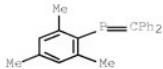
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(monomer; new route to phosphine polymers by addition polymerization of a P:C bond)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



IT 501418-46-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (new route to phosphine polymers by addition polymerization of a P:C bond)

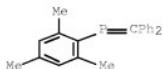
RN 501418-46-8 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-,
 homopolymer (CA INDEX NAME)

CM 1

CRN 67565-91-7

CMF C22 H21 P



IT 501418-46-8DP, oxidized or reaction products with sulfur
 (S8)

RL: SPN (Synthetic preparation); PREP (Preparation)
 (new route to phosphine polymers by addition polymerization of a P:C bond)

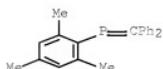
RN 501418-46-8 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-,
 homopolymer (CA INDEX NAME)

CM 1

CRN 67565-91-7

CMF C22 H21 P



CC 35-4 (Chemistry of Synthetic High Polymers)

IT 67565-91-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (monomer; new route to phosphine polymers by addition polymerization of a P:C bond)

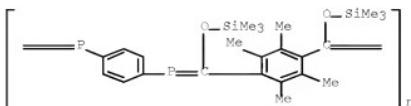
IT 501418-46-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

10/539,397-292586-EIC SEARCH

(new route to phosphine polymers by addition polymerization of a P:C bond)
IT 10544-50-ODP, Sulfur (S8), reaction products with poly(methylenephosphine), preparation 501418-46-8DE, oxidized or reaction products with sulfur (S8)
RL: SPN (Synthetic preparation); PREP (Preparation)
(new route to phosphine polymers by addition polymerization of a P:C bond)
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L39 ANSWER 4 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:548953 HCPLUS Full-text
DOCUMENT NUMBER: 137:248057
TITLE: Poly(p-phenylenephosphaalkene): A
π-conjugated macromolecule containing P=C
bonds in the main chain
AUTHOR(S): Wright, Vincent A.; Gates, Derek P.
CORPORATE SOURCE: Department of Chemistry, University of British Columbia, Vancouver, BC, V6T 1Z1, Can.
SOURCE: Angewandte Chemie, International Edition (2002), 41(13), 2389-2392
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 24 Jul 2002
AB An unprecedeted yellow polymer with low-coordinate phosphorus atoms in the backbone was prepared from tetramethylterephthaloyl chloride and 1,4-phenylenebis[bis(trimethylsilyl)phosphine]. The material is soluble in polar organic solvents, and moderate mol. wts. ($M_n = 2900\text{--}10,500 \text{ g mol}^{-1}$) were estimated from ^{31}P NMR spectroscopic end-group anal. The UV/visible spectra of the poly(p-phenylenephosphaalkene) in THF solution revealed a broad absorbance ($\lambda_{\text{max}} = 328\text{--}338 \text{ nm}$) and a tail stretching into the visible region. The bathochromic shift observed for the polymer compared with model compds. suggested some degree of π-conjugation through the phenylene and P=C units. The red shift was less than that for trans-poly(p-phenylenevinylene) compared with trans-stilbene (ca. 426 nm vs. 294/307 nm), which was attributed to conformational nonplanarity in the main chain caused by the bulky tetramethylphenylene groups in the polymer.
IT 460997-98-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(Poly(p-phenylenephosphaalkene) π-conjugated polymer containing P=C bonds in main chain)
RN 460997-98-2 HCPLUS
CN Poly[phosphinidyne-1,4-phenylenephosphinidyne[[{(trimethylsilyl)oxy]methylidyne}(2,3,5,6-tetramethyl-1,4-phenylene)[{(trimethylsilyl)oxy]methylidyne}]] (9CI) (CA INDEX NAME)



CC 35-5 (Chemistry of Synthetic High Polymers)
IT 460997-97-1P 460997-98-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP

(Preparation)

(poly(p-phenylenephosphaphalkene) π -conjugated polymer containing
P=C bonds in main chain)

REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE REFORMAT

L39 ANSWER 5 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:1344444 HCPLUS [Full-text](#)
DOCUMENT NUMBER: 127:81515
ORIGINAL REFERENCE NO.: 127:15633a,15636a
TITLE: Thermal reactions of
5-alkylidene-4,5-dihydro-3H-1,2,4(λ 3)-diazaphospholes (4-phosphapyrazolines). A route
to various P-heterocycles and to
2-phosphabutadienes
AUTHOR(S): Manz, Berthold; Bergstrasser, Uwe; Kerth,
Jochen; Maas, Gerhard
CORPORATE SOURCE: Fachbereich Chemie, Universitat
Kaiserslautern, Kaiserslautern, D-67663,
Germany
SOURCE: Chemische Berichte/Recueil (1997),
130(6), 779-788
CODEN: CHEBFW
PUBLISHER: Wiley-VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:81515
ED Entered STN: 31 May 1997
GI



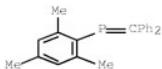
AB 5-Alkylidene-4,5-dihydro-3H-1,2,4(λ 3)-diazaphospholes (4-phosphapyrazolines) are thermally much more stable than related compds. without the exocyclic double bond. Thermolysis typically occurs at 110-150° in toluene and different, mostly competing, reaction pathways are observed. Thermal extrusion of N from phosphapyrazolines I [R = CHMe₂; R₁ = CMe₃, 1-adamantyl, Me, 4-MeOC₆H₄, 4-O₂NC₆H₄ or SiR₃ = SiMe₂CMe₃ or SiMe₂COMe₃, R₁ = CMe₃ with R₂ = mesityl, R₃ = R₄ = Ph] gives rise to β -phosphinyl siloxy alkenes, benzo[c]phospholes, (β -siloxyalkylidene)phosphiranes, and the appropriate dihydro-1,3-oxaphospholes II (R₅ = mesityl). Thermolysis of I (R = CMe₃, 1-adamantyl; R₁ = CHMe₂; R₂ = SiMe₃; R₃ = CMe₃; R₄ = OSiMe₃) afforded 3 products, including the corresponding highly substituted and stable phosphabutadienes (E,Z)-Me₃SiO(MeC₃):PC(SiMe₃):CROSi(CHMe₂)₃ (III) formed by N extrusion and rearrangement. Finally, I (R = CMe₃, R₁ = CHMe₂, R₂ = Cl, R₃ = CMe₃, R₄ = OSiMe₃) was transformed at 170° into a 4H-1,2,4-diazaphosphole. The structures of II (R = CMe₃, R₁ = SiPh₂CMe₃, R₅ = mesityl) and III (R = CMe₃) were determined by single-crystal x-ray diffraction.

IT 67565-91-7, Mesityl(dimethylmethylenephosphine)

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of phosphorus heterocycles and phosphabutadienes by thermal rearrangement and decomposition of alkylidenedihydrodiazaphospholes)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)-(CA INDEX
NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 67565-91-7, Mesityl(diphenylmethylene)phosphine
106435-59-0, 1-Diazo-1-(trisopropylsilyl)-2-propanone
162931-67-1 162931-68-2 181256-80-4 181256-81-5
181256-87-1 181256-89-3 181256-91-7 181256-92-8
181256-97-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of phosphorus heterocycles and phosphabutadienes by thermal rearrangement and decomposition of alkylidenedihydrodiazaphospholes)

L39 ANSWER 6 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:457583 HCPLUS [Full-text](#)

DOCUMENT NUMBER: 125:221959

ORIGINAL REFERENCE NO.: 125:41489a,41492a

TITLE: Synthesis of

5-alkylidene-4,5-dihydro-3H-1,2,4(λ3)-diazaphospholes from α-silyl-α-diazo ketones and phosphalkenes

AUTHOR(S): Manz, Berthold; Mass, Gerhard

CORPORATE SOURCE: Fachbereich Chemie, Univ. Kaiserlautern,
Kaiserslautern, D-67663, Germany

SOURCE: Tetrahedron (1996), 52(30),
10053-10072

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 125:221959

ED Entered STN: 02 Aug 1996

GI



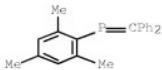
AB 5-Alkylidene-4,5-dihydro-3H-1,2,4(λ3)-diazaphospholes arise from [3+2] cycloaddn. reaction between various, differently substituted phosphalkenes and 2-siloxo-1-diazoalkenes that are present to a minor extent in a thermal equilibrium with α-silyl-α-diazo ketones. The cycloaddn. products, e.g. I, are sufficiently thermally stable to be isolated. In other cases, silyl group migration (ring C → N or O → N) leads to isomeric N-silyl-1,2,4-diazaphospholes. The crystal structures of I and II (Mes = mesityl) were determined

IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(cycloaddn. reaction with silyldiazoketone)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX
NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 63853-15-6 67565-91-7 74483-17-3 78129-68-7

79908-16-0 81979-44-4 181256-96-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(cycloaddn. reaction with silyldiazoketone)

L39 ANSWER 7 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:334236 HCPLUS Full-text

DOCUMENT NUMBER: 122:290959

ORIGINAL REFERENCE NO.: 122:53055a,53058a

TITLE:

Synthesis of alkylidenephosphiranes by
extrusion of nitrogen from
3-alkylidene-4,5-dihydro-3H-1,2,4-diazaphospho-
les

AUTHOR(S): Manz, Berthold; Maas, Gerhard

CORPORATE SOURCE: Fachbereich Chemie, Universitaet
Kaiserslautern, Kaiserslautern, D-67663,
Germany

SOURCE: Journal of the Chemical Society, Chemical
Communications (1995), (1), 25-6

CODEN: JCCCAT; ISSN: 0022-4936

PUBLISHER: Royal Society of Chemistry

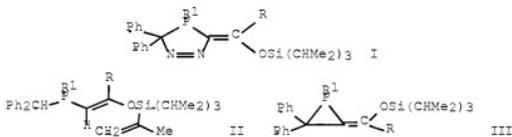
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 122:290959

ED Entered STN: 04 Feb 1995

GI



AB The 3-alkylidene-4,5-dihydro-3H-1,2,4-diazaphospholes I (R = Me3C, 1-adamantyl; R1 = mesityl), obtained from RIP:Ph2 and silyl diazo ketones RCOC(:N2)Si(CHMe2)3, undergo thermal extrusion of N to form alkenyl phosphines II and alkylidenephosphiranes III; the structures of these products were established by single crystal x-ray structure analyses.

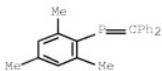
IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylidenedihydridiazaphospholes from)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX

NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 67565-91-7 106435-62-5 126419-13-4

RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylidenedithiodiazaphospholes from)

L39 ANSWER 8 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1987:423447 HCPLUS Full-text

DOCUMENT NUMBER: 107:23447

ORIGINAL REFERENCE NO.: 107:3967a, 3970a

TITLE: P-Coordinated Group VI metal(0) pentacarbonyl complexes of multiple-bond organophosphorus compounds in the low-coordination state

AUTHOR(S): Yoshifuiji, Masaaki; Shibayama, Katsuhiro; Hashida, Takashi; Toyota, Kozo; Niitsu, Takashi; Matsuda, Ikumi; Sato, Takahiro; Inamoto, Naoki

CORPORATE SOURCE: Fac. Sci., Univ. Tokyo, Tokyo, 113, Japan

SOURCE: Journal of Organometallic Chemistry (1986), 311(3), C63-C67

CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 25 Jul 1987

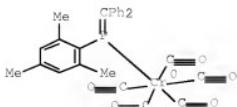
AB The ³¹P NMR of Group VI metal(0) carbonyl complexes of diphosphenes, phosphaethylenes, 1-phosphaallene, and 1,3-diphosphaallene with the P atom in the low coordination state were determined. The ³¹P chemical shifts of these complexes correlate to one another: the structures in solution could be determined by taking into account the correlation and P-W coupling const. in ³¹P NMR.

IT 78506-28-2 78777-19-2 108786-72-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(phosphorus-³¹NMR spectral characteristics of)

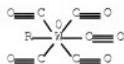
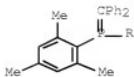
RN 78506-28-2 HCPLUS

CN Chromium, pentacarbonyl[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)

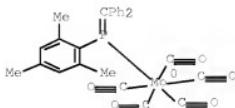


RN 78777-19-2 HCPLUS

CN Tungsten, pentacarbonyl[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)



RN 108786-72-7 HCPLUS
 CN Molybdenum, pentacarbonyl[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (CA-6-22)- (CA INDEX NAME)



CC 29-11 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 22

IT 78506-28-2 78777-19-2 90599-67-0 99279-48-8
 99279-52-4 99279-53-5 99331-06-3 99395-83-2 108771-14-8
 108786-67-0 108786-68-1 108786-69-2 108786-70-5
 108786-71-6 108786-72-7 108786-73-8 108786-74-9
 108865-75-0 108865-29-8 108865-30-1 108865-31-2
 108865-32-3 108865-33-4 108865-34-5 108865-35-6
 108865-36-7 108865-37-8 108866-78-0 108866-79-1

RL: RCT (Reactant); RACT (Reactant or reagent)
 (³¹P NMR spectral characteristics of)

L39 ANSWER 9 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1987:59303 HCPLUS Full-text

DOCUMENT NUMBER: 106:59303

ORIGINAL REFERENCE NO.: 106:9659a, 9662a

TITLE: Acyl- and alkylidenephosphines. XXIX.
 Molecular and crystal structure of
 orthorhombic
 (diphenylmethyldiene)mesitylphosphine
 Munkt, O.; Becker, G.; Uhl, W.; Massa, W.;
 Birkhahn, M.

AUTHOR(S): Inst. Anorg. Chem., Univ. Stuttgart,
 Stuttgart, D-7000/80, Fed. Rep. Ger.

CORPORATE SOURCE: Zeitschrift fuer Anorganische und Allgemeine
 Chemie (1986), 540-541, 319-35
 CODEN: ZAACAB; ISSN: 0044-2313

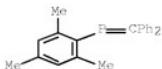
SOURCE: DOCUMENT TYPE:
 Journal
 LANGUAGE:

ED Entered STN: 21 Feb 1987

AB The title compound at -125 $\pm 3^\circ$ is orthorhombic, space group Pbca, with a 951.2(7), b 2115.8(9), and c 1737.0(18) pm; $Z = 8$. Atomic coordinates are given. Bond lengths and angles (P:C 169.3(2), P-C 183.3(2) pm, C-P:C 107.6(2) $^\circ$, P-C-C 124.8(2) $^\circ$ and 118.0(2) $^\circ$) are in almost exact conformity with those obtained from a monoclinic polymorph. With respect to mol. conformation, however, the title compound resembles the homologous (diphenylmethyldiene)mesitylamine.

IT 67565-91-7, (Diphenylmethyldiene)mesitylphosphine

RL: PRP (Properties)
 (crystal structure of orthorhombic)
 RN 67565-91-7 HCPLUS
 CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)

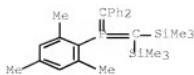


CC 75-8 (Crystallography and Liquid Crystals)
 Section cross-reference(s): 29
 IT 67565-91-7, (Diphenylmethylidene)mesitylphosphine
 RL: PRP (Properties)
 (crystal structure of orthorhombic)

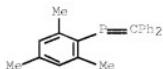
L39 ANSWER 10 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1986:460681 HCPLUS [Full-text](#)
 DOCUMENT NUMBER: 105:60681
 ORIGINAL REFERENCE NO.: 105:9927a, 9930a
 TITLE: Low-coordinated phosphorus compounds. 45.
 Mixed substituted bismethylenephosphoranes by
 the reaction of carbenoids with phosphaalkenes
 AUTHOR(S): Appel, Rolf; Gaitzsch, Thomas; Knoch, Falk;
 Lenz, Gerhard
 CORPORATE SOURCE: Anorg.-Chem. Inst., Univ. Bonn, Bonn,
 D-5300/1, Fed. Rep. Ger.
 SOURCE: Chemische Berichte (1986), 119(6),
 1977-85
 CODEN: CHBEAM; ISSN: 0009-2940
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 OTHER SOURCE(S): CASREACT 105:60681
 ED Entered STN: 23 Aug 1986
 GI



AB The reaction of R1P:CR2R3 (R1 = Me3C, Ph, mesityl; R2, R3 = Ph, Me3Si) with R2C(Li)Cl
 (R = Ph, Me3Si) gave 7 R1P(:CR2):CR2R3 (I). I rearranged to give 77-89% phosphiranes II
 (R = Ph, Me3C). The crystal structures of 2,4,6-Me3C6H2P(:CPh2):C(SiMe3)2 and II (R1 =
 Ph) were determined
 IT 100993-28-0P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation and spectra of)
 RN 100993-28-0 HCPLUS
 CN Phosphine, [bis(trimethylsilyl)methylene](diphenylmethylene)(2,4,6-
 trimethylphenyl)- (CA INDEX NAME)



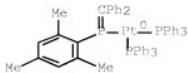
IT 67565-91-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with carbenoids, bismethylenephosphoranes from)
 RN 67565-91-7 HCAPLUS
 CN Phosphine, (diphenylmethylenne) (2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 75
 IT 56431-99-3P 80359-67-7P 96041-40-6P 100938-89-4P
 100938-90-7P 100938-91-8P 100993-28-0P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation and spectra of)
 IT 67565-91-7 78928-40-2 78928-41-3 81979-44-4
 89982-70-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with carbenoids, bismethylenephosphoranes from)

L39 ANSWER 11 OF 27 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1985:166931 HCAPLUS Full-text
 DOCUMENT NUMBER: 102:166931
 ORIGINAL REFERENCE NO.: 102:26253a,26256a
 TITLE: The η^1 - and η^2 -coordination in
 phosphaalkeneplatinum(0) complexes. High
 resolution solid state phosphorus-31 NMR
 spectrum of
 mesityl(diphenylmethylenne)phosphinebis(triphenylphosphine)platinum(0)
 AUTHOR(S): Kroto, Harold W.; Klein, Stanlei I.; Meidine,
 Mohamed F.; Nixon, John F.; Harris, Robin K.;
 Packer, Kenneth J.; Reams, Patrick
 Sch. Chem. Mol. Sci., Univ. Sussex, Brighton,
 BN1 9QJ, UK
 CORPORATE SOURCE: Journal of Organometallic Chemistry (1985), 280(2), 281-7
 SOURCE: CODEN: JORCAI; ISSN: 0022-328X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 18 May 1985
 AB The high resolution solid state 31P NMR spectrum of Pt(PPh3)2(PR:CPh2) (R = mesityl)
 shows the expected features for an η^1 -coordinated phosphaalkene ligand and is
 completely different from that of the η^2 -complex with exists in solution
 IT 80737-43-5
 RL: PRP (Properties)
 (phosphorus-31 NMR spectrum of, solid state, coordination in)
 RN 80737-43-5 HCAPLUS
 CN Platinum, [(diphenylmethylenne) (2,4,6-

trimethylphenyl)phosphine]bis(triphenylphosphine)- (CA INDEX
NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 22
IT 80737-43-5
RL: PRP (Properties)
(phosphorus-31 NMR spectrum of, solid state, coordination in)

L39 ANSWER 12 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1984:630744 HCPLUS [Full-text](#)
DOCUMENT NUMBER: 101:230744
ORIGINAL REFERENCE NO.: 101:35045a, 35048a

TITLE: The η^1 - and η^2 -coordination in a
(phosphalkene)platinum(0) complex
AUTHOR(S): Van der Knaap, Theodorus A.; Bickelhaupt,
Friedrich; Kraaykamp, Johanna G.; Van Koten,
Gerard; Bernards, Jan P. C.; Edzes, Hommo T.;
Veeman, Wiebren S.; De Boer, Engbert;
Baerends, Evert J.

CORPORATE SOURCE: Scheikd. Lab., Vrije Univ., Amsterdam, Neth.
SOURCE: Organometallics (1984), 3(12),
1804-11

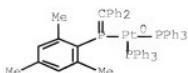
DOCUMENT TYPE: CODEN: ORGND7; ISSN: 0276-7333
Journal
LANGUAGE: English

ED Entered STN: 22 Dec 1984

AB The complex ($\text{Ph}_2\text{C:PR}$) $\text{Pt}(\text{PPh}_3)_2$ (R = mesityl), prepared from (H_2CH_2) $\text{Pt}(\text{PPh}_3)_2$ and
 $\text{Ph}_2\text{C:PR}$, can coordinate the $\text{Ph}_2\text{C:PR}$ ligand in either the η^1 -mode (I) or the η^2 -mode
(II). Solid-state ^{31}P NMR spectroscopy confirmed the known η^1 -mode in the crystalline
state. Temperature-dependent ^{31}P and ^{195}Pt NMR spectra in toluene-d₈ showed that the
equilibrium I .dblwarr. II was established in solution. This is the 1st case of a
directly observable equilibrium between the 2 coordination modes. Hartree-Fock-Slater
(LCAO-Xam) calcns. on the model system ($\text{PH}_3)_2\text{Pt}\cdot\text{H}_2\text{CH}_2$ showed that the η^2 -coordination
corresponded to the Dewar-Chatt-Duncanson model and was energetically favored over the
 η^1 -coordination due to the stronger π -back-donation even though the σ -donation was
weaker. The differences are not large and may be overruled by nonbonded interactions
when larger ligands are involved. Nevertheless, the exptl. evidence proved that the
calculated order $\eta^2 > \eta^1$ holds for the rather bulky ligand $\text{Ph}_2\text{C:PR}$.

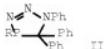
IT 80737-43-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(preparation and coordination of, equilibrium in)
RN 80737-43-5 HCPLUS
CN Platinum, [(diphenylmethylene)(2,4,6-
trimethylphenyl)phosphine]bis(triphenylphosphine)- (CA INDEX
NAME)

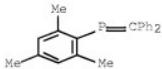


CC 29-13 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 22
 IT 80737-43-SP 89934-21-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and coordination of, equilibrium in)

L39 ANSWER 13 OF 27 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1984:455208 HCAPLUS Full-text
 DOCUMENT NUMBER: 101:55208
 ORIGINAL REFERENCE NO.: 101:8581a, 8584a
 TITLE: [4 + 2] cycloaddition reactions of triarylphosphphaalkenes
 AUTHOR(S): Van der Knaap, Theodorus A.; Klebach, Theodorus C.; Visser, Foppe; Lourens, Rimmer; Bickelhaupt, Friedrich
 CORPORATE SOURCE: Vakgroep Org. Chem., Vrije Univ., Amsterdam, 1081 HV, Neth.
 SOURCE: Tetrahedron (1984), 40(6), 991-7
 CODEN: TETRAB; ISSN: 0040-4020
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 101:55208
 ED Entered STN: 18 Aug 1984
 GI

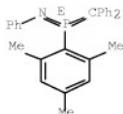


AB Cycloaddn. reactions of mesityl(diphenylmethylene)phosphine (I) were investigated. With several dienes, no Diels-Alder reactions were observed. With azides, diphenyldiazomethane and 2,4,6-trimethylbenzonitrile oxide, the corresponding cycloadducts were obtained. Thus, I and PhN₃ gave the cycloadduct II (R = mesityl); RP(:CPh₂):NPh was also formed from a competing Staudinger reaction.
 IT 67565-91-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cycloaddn. reactions of)
 RN 67565-91-7 HCAPLUS
 CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)

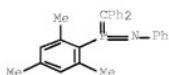


IT 91075-79-5P 91075-80-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 91075-79-5 HCAPLUS
 CN Benzenamine, N-[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphoranylidene]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 91075-80-8 HCPLUS
 CN Benzenamine, N-[(diphenylmethylene) (2,4,6-trimethylphenyl)phosphoranylidene]-, (Z)- (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 67565-91-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cycloaddn. reactions of)
 IT 25034-65-5P 25568-84-7P 91075-79-5P
 91075-80-8P 91075-81-9P 91075-82-0P 91075-83-1P
 91075-84-2P 91075-85-3P 91075-86-4P 91075-87-5P
 91108-21-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L39 ANSWER 14 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1984:438554 HCPLUS Full-text
 DOCUMENT NUMBER: 101:38554
 ORIGINAL REFERENCE NO.: 101:60334,6036a
 TITLE: Synthesis and structure of aryl-substituted
 phosphalkenes
 AUTHOR(S): Van der Knaap, T. A.; Klebach, T. C.; Visser,
 F.; Bickelhaupt, F.; Ros, P.; Baerends, E. J.;
 Stam, C. H.; Konijn, M.
 CORPORATE SOURCE: Vakgroep Org. Chem., Vrije Univ., Amsterdam,
 1081 HV, Neth.
 SOURCE: Tetrahedron (1984), 40(4), 765-76
 CODEN: TETRAB; ISSN: 0040-4020
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 101:38554
 ED Entered STN: 04 Aug 1984
 AB The preferred route for preparing RP:CPh₂ (I; R = 2,4,6-Me₃C₆H₂, 2,6-Me₂C₆H₃) started from RBr, which were treated with Mg and ClP(NEt₂)₂ to give RP(NEt₂)₂. Chlorination of the last gave RPClNEt₂, which were alkylated to form RPClCHPh₂ (II). Dehydrochlorination of II gave I in 60-85% yield. I have essentially localized P:C bonds and are sterically stabilized. These conclusions were confirmed by HFS-calcn.s. on model compds. X:CH₂ (X = NH, PH, PPh), (E)-HP:CHPh, and (E)-HP:CHNMe₂ (III) which identified the P lone pair as HOMO and the π-orbital as NHOMO; however, both orbitals are close in energy. Furthermore, the calcn.s. revealed the importance of phosphorus d-orbitals in bonding, and the polarization in the P:C bond (P as pos. pole), which had earlier been derived from chemical evidence. Finally, interaction of the P:C bond with P groups did not influence the bonding situation, but substitution by a heteroatom, in III, did. The crystal structure of I (R = 2,4,6-Me₃C₆H₂) showed a short P:C bond length

10/539,397-292586-EIC SEARCH

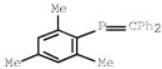
and a R-P-C bond angle smaller than expected for purely sp₂-hybridized atoms, but larger than that in the unsubstituted parent compound HP:CH₂.

IT 67565-91-7P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and crystal structure of)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene) (2,4,6-trimethylphenyl)- (CA INDEX NAME)

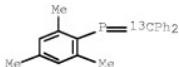


IT 90929-04-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 90929-04-7 HCPLUS

CN Phosphine, (diphenylmethylene-13C) (2,4,6-trimethylphenyl)- (9CI)
 (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 22, 75

IT 67565-91-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and crystal structure of)

IT 85320-16-7P 85320-25-8P 90929-00-3P 90929-01-4P

90929-02-5P 90929-04-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L39 ANSWER 15 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1984:191971 HCPLUS Full-text

DOCUMENT NUMBER: 100:191971

ORIGINAL REFERENCE NO.: 100:29191a,29194a

TITLE: Reactivity of phosphaalkenes

AUTHOR(S): Van der Knaap, Theodorus A.; Bickelhaupt, Friedrich

CORPORATE SOURCE: Vakgroep Org. Chem., Vrije Univ., Amsterdam, Neth.

SOURCE: Phosphorus and Sulfur and the Related Elements (1983), 18(1-2-3), 47-50

CODEN: PREEDF; ISSN: 0308-664X

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 08 Jun 1984

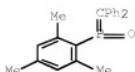
AB The reactions of RP:CPh2 (R = 2,4,6-Me₃C₆H₃; 2,6-Me₂C₆H₃) with oxidants O₂, S₈, Se, Te, H₂O₂, with o-quinones, and with Pt(0)- and Ni(0)-complexes were described.

IT 89982-79-6P 89982-81-0P 89982-83-2P

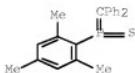
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

10/539,397-292586-EIC SEARCH

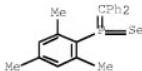
(preparation and reaction of, with ethanol)
 RN 89982-79-6 HCAPLUS
 CN Phosphine oxide, (diphenylmethylene) (2,4,6-trimethylphenyl)- (CA INDEX NAME)



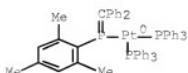
RN 89982-81-0 HCAPLUS
 CN Phosphine sulfide, (diphenylmethylene) (2,4,6-trimethylphenyl)- (CA INDEX NAME)



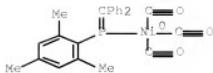
RN 89982-83-2 HCAPLUS
 CN Phosphine selenide, (diphenylmethylene) (2,4,6-trimethylphenyl)- (CA INDEX NAME)



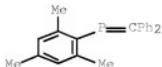
IT 80737-43-5P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and structure of)
 RN 80737-43-5 HCAPLUS
 CN Platinum, [(diphenylmethylene) (2,4,6-trimethylphenyl)phosphine]bis(triphenylphosphine)- (CA INDEX NAME)



IT 89001-33-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 89001-33-2 HCAPLUS
 CN Nickel, tricarbonyl[(diphenylmethylene) (2,4,6-trimethylphenyl)phosphine]-, (T-4)- (CA INDEX NAME)



IT 67565-91-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactions of)
 RN 67565-91-7 HCAPLUS
 CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 85830-26-8P 89982-79-6P 89982-81-0P
 89982-82-1P 89982-83-2P 89982-87-6P 89982-88-7P
 89982-89-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation and reaction of, with ethanol)
 IT 80737-43-5P 89934-21-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation and structure of)
 IT 6782-00-9P 85320-17-8P 85320-18-9P 85320-19-0P 85354-76-3P
 85814-50-2P 89001-33-2P 89183-92-6P 89291-02-1P
 89291-07-6P 89291-08-7P 89291-12-3P 89934-20-3P
 89982-84-3P 89982-85-4P 89982-86-5P 89982-90-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 67565-91-7 85320-16-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactions of)

L39 ANSWER 16 OF 27 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1984:175046 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 100:175046
 ORIGINAL REFERENCE NO.: 100:26633a,26636a
 TITLE: Syntheses, structures, and photoelectron
 spectra of phosphaalkenes and phosphaalkynes
 and their transition metal complexes
 AUTHOR(S): Burkett-St. Laurent, J. C. T. R.; Hitchcock,
 P. B.; King, M. A.; Kroto, H. W.; Meidine, M.
 F.; Klein, S. I.; Al-Resayes, S. I.; Suffolk,
 R. J.; Nixon, J. F.
 CORPORATE SOURCE: Sch. Chem. Mol. Sci., Univ. Sussex,
 Brighton/Sussex, BN1 9QJ, UK
 SOURCE: Phosphorus and Sulfur and the Related Elements
 (1983), 18(1-2-3), 259-62
 DOCUMENT TYPE: CODEN: PREEDF; ISSN: 0308-664X
 LANGUAGE: Journal
 ED Entered STN: 26 May 1984
 GI



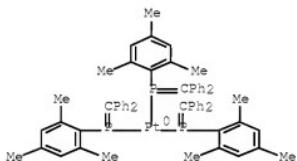
AB Me₃CC.tplbond.P reacted with Co₂(CO)₈ to give Co₂(CO)₆(P.tplbond.CCMe₃), which reacted with W(CO)₅(THF) (I) to give the cluster compound II [M = Co(CO)₃]. Similarly, Me₃CC.tplbond.P reacted with Cp(CO)₂Mo.tplbond.Mo(CO)₂Cp (Cp = cyclopentadienyl) and I to give II [M = Mo(CO)₂Cp]. Treating PtL₂ (L = cyclooctadiene) with RP:CPh₂ (R = mesityl) gave (η^1 PR:CPh₂)₂Pt. PtL₂ reacted with RP:CPh₂ and Me₃CC.tplbond.P to form (η^1 PR:CPh₂)₂(η^2 -Me₃CC.tplbond.P)Pt.

IT 89041-27-0P 89041-28-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

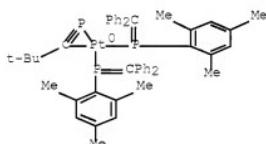
RN 89041-27-0 HCPLUS

CN Platinum, tris[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]- (CA INDEX NAME)



RN 89041-28-1 HCPLUS

CN Platinum, [η^2 -(2,2-dimethylpropylidyne)phosphine]bis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]- (9CI) (CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

IT 84685-75-6P 84698-60-2P 89041-27-0P

89041-28-1P 89869-53-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

L39 ANSWER 17 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1984:121313 HCPLUS Full-text

DOCUMENT NUMBER: 100:121313

ORIGINAL REFERENCE NO.: 100:18469a,18472a

10/539,397-292586-EIC SEARCH

TITLE:

Complex formation between nickel(0) and a phosphoalkene: influence of the second ligand on the η^1 - and η^2 -coordination mode
 Van der Knaap, Theodorus A.; Jenneskens, Leo W.; Meeuwissen, Hendrik J.; Bickelhaupt, Friedrich; Walther, Dirk; Dinjus, Eckard; Uhlig, Egon; Spek, Anthony L.

CORPORATE SOURCE:

Vakgroep Org. Chem., Vrije Univ., Amsterdam,
 1081 HV, Neth.

SOURCE:

Journal of Organometallic Chemistry (1983), 254(3), C33-C36

CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE:

Journal

LANGUAGE:

English

ED Entered STN: 12 May 1984

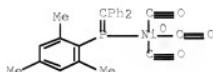
AB Treating LiLiL ($L = 2,2'$ -bipyridine; Ll-1,5-cyclooctadiene) with Ph₂C:PC₆H₃Me₂-2,6 gave μ_2 -(Ph₂C:PC₆H₄Me₂-2,6)NiL, which was characterized by x-ray anal. In contrast, treating Ni(CO)₄ with Ph₂C:PR (R = C₆H₂Me₃-2,4,6) gave (CO)₃Ni(η^1 -PR:CPH₂)₂, which gave (CO)Zn(CP₂H₂)₂ by CO loss.

IT 88001-33-2P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and carbon monoxide loss of)

RN 88001-33-2 HCPLUS

CN Nickel, tricarbonyl[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (T-4)- (CA INDEX NAME)

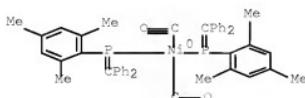


IT 88994-64-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

RN 88994-64-3 HCPLUS

CN Nickel, dicarbonylbis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (T-4)- (CA INDEX NAME)

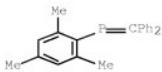


IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with nickel tetracarbonyl)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 89001-33-2B

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and carbon monoxide loss of)

IT 88994-64-3B

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nickel tetracarbonyl)

L39 ANSWER 18 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1984:103587 HCPLUS Full-text

DOCUMENT NUMBER: 100:103587

ORIGINAL REFERENCE NO.: 100:15749a,15752a

TITLE: Synthesis of η^1 - and
 η^2 -phosphaalkene-transition metal
complexes and the first examples of complexes
containing only ligated phospha alkenes and
phospha alkynes

AUTHOR(S): Al-Resayes, Saud I.; Klein, Stanlei I.; Kroto,
Harold W.; Meidine, Mohamed F.; Nixon, John F.

CORPORATE SOURCE: Sch. Chem. Mol. Sci., Univ. Sussex, Brighton,
BN1 9QJ, UK

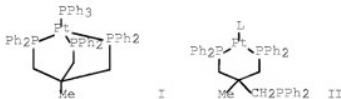
SOURCE: Journal of the Chemical Society, Chemical
Communications (1983), (17), 930-2
CODEN: JCCCAT; ISSN: 0022-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 May 1984

GI



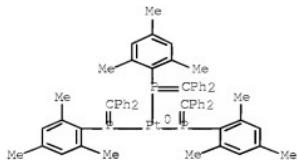
AB Displacement reactions of the Pt complex I unexpectedly gave the η^2 -complexes II (L = η^2 -Ph₂C:PC₆H₂Me₃-2,4,6, η^2 -Me₃CC.tplbond.P). However, treatment of Pt(COD)₂ (III; COD = 1,5-cyclooctadiene) with Ph₂C:PC₆H₂Me₃-2,4,6 (L1) gave η^1 -P+L1₃. Similarly, treatment of III with a 2:1 mixture of L1 and P.tplbond.CCMe₃ (L2) gave (η^1 -L1)₂Pt(η^2 -L₂).

IT 89041-27-OP 89041-28-1F

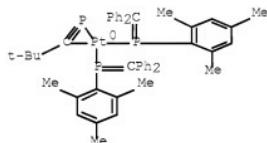
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 89041-27-0 HCPLUS

CN Platinum, tris[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]- (CA INDEX NAME)



RN 89041-28-1 HCAPLUS
 CN Platinum, [η₂-(2,2-dimethylpropylidyne)phosphine]bis[(diphenylmethylenes)(2,4,6-trimethylphenyl)phosphine]- (9CI) (CA INDEX NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)
 IT 89041-26-5P 89041-27-0P 89041-28-1P
 89063-20-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

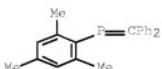
L39 ANSWER 19 OF 27 HCAPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1983:405700 HCAPLUS [Full-text](#)
 DOCUMENT NUMBER: 99:5700
 ORIGINAL REFERENCE NO.: 99:1041a,1044a
 TITLE: Oxidation reactions of phosphaalkenes
 AUTHOR(S): Van der Knaap, T. A.; Klebach, T. C.; Lourens, R.; Vos, M.; Bickelhaupt, F.
 CORPORATE SOURCE: Vakgroep Organ. Chem., Vrije Univ., Amsterdam, 1081 HV, Neth.
 SOURCE: Journal of the American Chemical Society (1983), 105(12), 4026-32
 CODEN: JACSAT; ISSN: 0002-7863
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 99:5700
 ED Entered STN: 12 May 1984
 AB Phosphaalkenes such as 2,4,6-Me₃C₆H₂P:CHPh₂ (I) and 2,6-Me₂C₆H₃P:CHPh₂ (II) are quite reactive in many respects but are rather sluggish in their reaction with O and S. Primary intermediates in the reactions of II are its oxide, 2,6-Me₂C₆H₃P(O):CHPh₂ (III) [or the S analog 2,6-Me₂C₆H₃P(S):CHPh₂, resp.], and the phosphinidene oxide 2,6-Me₂C₆H₃P(O): (IV) [or its S analog 2,6-Me₂C₆H₃P(S):], which together with (thio)benzophenone is formed by oxidative cleavage of the P:C bond. The occurrence of these unstable intermediates is concluded from their interception by ethanol [yielding 2,6-Me₂C₆H₃P(O)(OEt)CHPh₂ (V) and IV] or water [yielding 2,6-Me₂C₆H₃P(O)(OH)CHPh₂ (VI) and 2,6-Me₂C₆H₃P(O)(OH)H] in the O reactions and by ethanol [yielding 2,6-

Me₂C₆H₃P(S)(OEt)CHPh₂ and 2,6-Me₂C₆H₃P(S)(OEt)H] in the S reaction. With O, III reacts in part further under cleavage of the P:C bond and formation of benzophenone and the phosphinidene dioxide 2,6-Me₂C₆H₃PO₂ which is intercepted by ethanol [yielding 2,6-Me₂C₆H₃P(O)(OEt)(OH)] or water [yielding 2,6-Me₂C₆H₃P(O)(OH)₂]. These interception reactions are feasible because I and II are unreactive towards water and alc. in the absence of acid or base catalysis. Treatment of II with H₂O₂ in ethanol proceeds also largely via III; it leads to V, VI, and 2,6-Me₂C₆H₃P(O)(CHPh₂)H; in this case, cleavage of the P:C bond is not observed. The mechanism of these reactions and the competition between various reactants (e.g., between O, H₂O, EtOH) are discussed. The structure of the reaction products is determined from their spectral properties and by alternative synthesis along unequivocal routes.

IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylenne) (2,4,6-trimethylphenyl)- (CA INDEX
NAME)

CC 29-7 (Organometallic and Organometalloidal Compounds)

IT 67565-91-7 85320-16-7 85320-24-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of)

L39 ANSWER 20 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1982:582527 HCPLUS Full-text

DOCUMENT NUMBER: 97:182527

ORIGINAL REFERENCE NO.: 97:30545a, 30548a

TITLE: A nucleophilic reaction of a phosphaalkene:
the methylation of

mesityldiphenylmethylenephosphine

AUTHOR(S): Van der Knaap, T. A.; Bickelhaupt, F.

CORPORATE SOURCE: Vakgroep Org. Chem., Vrije Univ. De Boelelaan,
Amsterdam, 1081 HV, Neth.SOURCE: Tetrahedron Letters (1982), 23(19),
2037-40

CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 May 1984

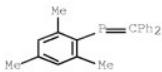
AB Methylation of 2,4,6-Me₃C₆H₂P:CH₂ (I) with MeI in a sealed vessel at 50° for 24 h in the dark gave 80% 2,4,6-Me₃C₆H₂PMe:CH₂ (II) and 1-5% 2,4,6-Me₃C₆H₂P+Me₂CHPh₂ I- (III). The reaction mechanism involves nucleophilic attack of the P atom of I on MeI to form the reactive intermediate 2,4,6-Me₃C₆H₂P+Me:CH₂ I-, which gave II on addition of I- whereas addition of MeI followed by elimination gave III. The regioselectivity of the addition reactions of I is discussed.

IT 67565-91-7

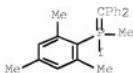
RL: RCT (Reactant); RACT (Reactant or reagent)
(methylation of, mechanism of)

RN 67565-91-7 HCPLUS

CN Phosphine, (diphenylmethylenne) (2,4,6-trimethylphenyl)- (CA INDEX
NAME)



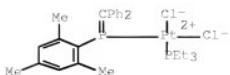
IT 83438-74-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation and nucleophilic addition reactions of)
 RN 83438-74-8 HCPLUS
 CN Phosphorane, (diphenylmethylene)iodomethyl(2,4,6-trimethylphenyl)-
 (9CI) (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 67565-91-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (methylation of, mechanism of)
 IT 83438-74-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (preparation and nucleophilic addition reactions of)

L39 ANSWER 21 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1982:448559 HCPLUS Full-text
 DOCUMENT NUMBER: 97:48559
 ORIGINAL REFERENCE NO.: 97:8031a,8034a
 TITLE: Synthesis and phosphorus-31 NMR spectra of some platinum(II) complexes of the phospha-alkene, (mesityl)P=CPh2. Crystal and molecular structure of cis-[PtCl2(PEt3)(C6H2Me3P=CPh2)]·CHCl3
 AUTHOR(S): Krot, Harold W.; Nixon, John F.; Taylor, Michael J.; Frew, Aileen A.; Muir, Kenneth W.
 CORPORATE SOURCE: Sch. Chem. Mol. Sci., Univ. Sussex, Brighton, BN1 9QJ, UK
 SOURCE: Polyhedron (1982), 1(1), 89-95
 CODEN: PLYHDE; ISSN: 0277-5387
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 May 1984
 AB Syntheses of the phospha-alkene complexes cis- and trans-[PtCl2(PEt3)L] (L = 2,4,6-Me3C6H2P=CPh2) and cis-[PtX2L2] (X = Cl, I, Me) complexes are reported. 31P NMR spectra indicate that bonding of the phospha-alkene to the metal is via the P lone pair and this is confirmed by a single crystal x-ray diffraction study of cis-[PtCl2(PEt3)L]·CHCl3.
 IT 82383-13-9
 RL: PRP (Properties)
 (crystal and mol structure of)
 RN 82383-13-9 HCPLUS
 CN Platinum, dichloro[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine](triethylphosphine)-, (SP-4-3)-, compd. with trichloromethane (1:1) (9CI) (CA INDEX NAME)

CRN 78777-26-1
 CMF C28 H36 Cl2 P2 Pt
 CCI CCS

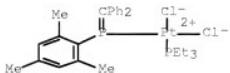


CM 2

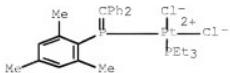
CRN 67-66-3
 CMF C H Cl3



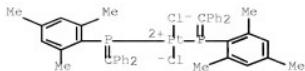
IT 78777-26-1P 78822-10-3P 82335-44-2P
 82335-45-3P 82335-46-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation and NMR of)
 RN 78777-26-1 HCPLUS
 CN Platinum, dichloro[(diphenylmethylenne)(2,4,6-trimethylphenyl]phosphine)-, (SP-4-3)- (CA
 INDEX NAME)



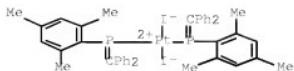
RN 78822-10-3 HCPLUS
 CN Platinum, dichloro[(diphenylmethylenne)(2,4,6-trimethylphenyl]phosphine)-, (SP-4-1)- (CA
 INDEX NAME)



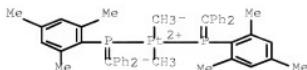
RN 82335-44-2 HCPLUS
 CN Platinum, dichlorobis[(diphenylmethylenne)(2,4,6-trimethylphenyl]phosphine)-, (SP-4-2)- (CA INDEX NAME)



RN 82335-45-3 HCAPLUS
 CN Platinum, bis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]diiodo-, (SP-4-2)- (CA INDEX NAME)



RN 82335-46-4 HCAPLUS
 CN Platinum, bis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]dimethyl-, (SP-4-2)- (CA INDEX NAME)



CC 78-7 (Inorganic Chemicals and Reactions)
 Section cross-reference(s): 75, 77
 IT 82285-08-3 82335-13-9
 RL: PRP (Properties)
 (crystal and mol structure of)
 IT 78777-21-6P 78777-26-1P 78789-42-1P
 78822-10-3P 82335-44-2P 82335-45-3P
 82335-46-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation and NMR of)

L39 ANSWER 22 OF 27 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1982:122995 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 96:122995

ORIGINAL REFERENCE NO.: 96:20205A, 20208a

TITLE: Synthesis and structural investigation of
 [mesityl(diphenylmethylene)phosphine]bis(triphenylphosphine)platinum(0)

AUTHOR(S): Van der Knaap, T. A.; Bickelhaupt, F.; Van der Poel, H.; Van Koten, G.; Stam, C. H.

CORPORATE SOURCE: Vakgroep Org. Chem., Vrije Univ., Amsterdam,
 1081 HV, Neth.

SOURCE: Journal of the American Chemical Society (1982), 104(6), 1756-7

CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 May 1984

AB Reaction of (C_2H_4) $Pt(CPh_3)_2$ with RP:CPh₂ (I; R = mesityl) in PhMe gave the dark-red complex (RP:CPh₂) $Pt(PPh_3)_2$ (II). X-ray crystal structure determination showed that Pt

10/539,397-292586-EIC SEARCH

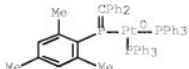
is tricoordinate in II, with the ligand I σ -coordinated via P; η^2 -coordination via the Pt:C π bond does not occur. However, in solution the ^{31}P NMR data point either to η^2 -coordination or to rather unusual bonding interactions between Pt and P in the σ -coordination mode.

IT 80737-43-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, crystal and mol. structure, and phosphorus-31 NMR
spectrum of, bonding in relation to)

RN 80737-43-5 HCPLUS

CN Platinum, [(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]bis(triphenylphosphine)- (CA INDEX
NAME)



CC 29-13 (Organometallic and Organometalloidal Compounds)

IT 80737-43-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, crystal and mol. structure, and phosphorus-31 NMR
spectrum of, bonding in relation to)

L39 ANSWER 23 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1982:122872 HCPLUS Full-text

DOCUMENT NUMBER: 96:122872

ORIGINAL REFERENCE NO.: 96:20181a, 20184a

TITLE: Acyl- and alkylidenedephosphines. XVI.
(Dimethylaminomethylidene) and
(diphenylmethylidene)phosphines

AUTHOR(S): Becker, G.; Uhl, W.; Wessely, H. J.

CORPORATE SOURCE: Fachber. Chem., Philipps-Univ., Marburg, Fed.
Rep. Ger.

SOURCE: Zeitschrift fuer Anorganische und Allgemeine
Chemie (1981), 479, 41-56
CODEN: ZAACAB; ISSN: 0044-2313

DOCUMENT TYPE: Journal

LANGUAGE: German

OTHER SOURCE(S): CASREACT 96:122872

ED Entered STN: 12 May 1984

GI



AB RP(SiMe3)2 (R = 2,4,6-Me3C6H2, CMe3, Ph, Me) reacted with DMF or Ph2CO with solid NaOH catalyst to give RP:CHNMe2 or RP:CPh2, resp. The same products were obtained from RPLiSiMe3. RP:CHNMe2 (R = Me, Ph) dimerized to I and PhP:CPh2 to II.

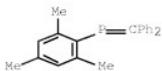
IT 67565-91-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 67565-91-7 HCPLUS

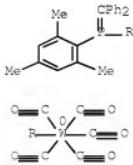
CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX

NAME)



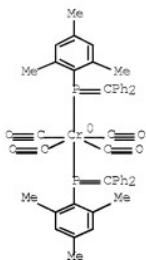
CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 67565-91-7P 79908-16-0P 79908-18-2P 79908-19-3P
 79908-21-7P 79908-22-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L39 ANSWER 24 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1981:497907 HCPLUS Full-text
 DOCUMENT NUMBER: 95:97907
 ORIGINAL REFERENCE NO.: 95:16459a,16462a
 TITLE: Synthesis of phosphaalkene transition metal complexes
 AUTHOR(S): Eshtiagh-Hosseini, H.; Kroto, Harold W.; Nixon, John F.; Maah, Mohd. Jamil; Taylor, Michael J.
 CORPORATE SOURCE: Sch. Mol. Sci., Univ. Sussex, Brighton, BN1 9QJ, UK
 SOURCE: Journal of the Chemical Society, Chemical Communications (1981), (4), 199-200
 CODEN: JCCCAT; ISSN: 0022-4936
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 ED Entered STN: 12 May 1984
 AB The coordination complexes cis-M(CO)4L2 (M = Cr, Mo, W), trans-RhCl(PPh₃)₂L, trans-RhCl₂(CO), Rh(η^5 -indenyl)L₂, cis-PtR₂L₂, (R = Cl, iod, Me), and cis- and trans-PtCl₂(P₂t₂)L [L = PR₂Ph₂ (R = mesityl)] were prepared by substitution of transition metal complexes with PR₂Ph₂ (R = mesityl) (I). I coordinates to the metal via the P lone pair.
 IT 78777-19-2P 78777-20-5P 78777-26-1P
 78777-34-1P 78777-35-2P 78777-36-3P
 78777-37-4P 78784-52-8P 78784-53-9P
 78784-54-0P 78790-07-5P 78822-10-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 RN 78777-19-2 HCPLUS
 CN Tungsten, pentacarbonyl[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)



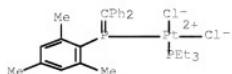
RN 78777-20-5 HCPLUS
 CN Chromium, tetracarbonylbis[(diphenylmethylene)(2,4,6-

trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)



RN 78777-26-1 HCPLUS

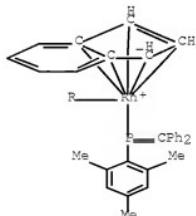
CN Platinum, dichloro[(diphenylmethylenes)(2,4,6-trimethylphenyl)phosphine](triethylphosphine)-, (SP-4-3)- (CA INDEX NAME)

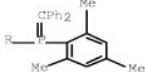


RN 78777-34-1 HCPLUS

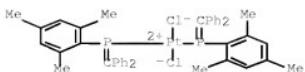
CN Rhodium, bis[(diphenylmethylenes)(2,4,6-trimethylphenyl)phosphine][(1,2,3,3a,7a-η)-1H-inden-1-yl]- (CA INDEX NAME)

PAGE 1-A





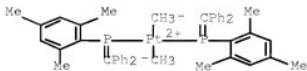
RN 78777-35-2 HCPLUS
 CN Platinum, dichlorobis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]- (CA INDEX NAME)



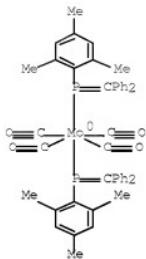
RN 78777-36-3 HCPLUS
 CN Platinum, bis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]diiodo- (CA INDEX NAME)



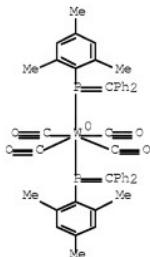
RN 78777-37-4 HCPLUS
 CN Platinum, bis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]dimethyl- (CA INDEX NAME)



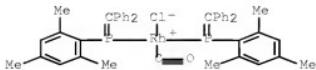
RN 78784-52-8 HCPLUS
 CN Molybdenum, tetracarbonylbis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)



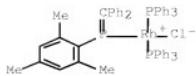
RN 78784-53-9 HCPLUS
 CN Tungsten, tetracarbonylbis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)



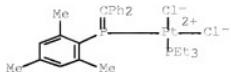
RN 78784-54-0 HCPLUS
 CN Rhodium, carbonylchlorobis[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (SP-4-3)- (CA INDEX NAME)



RN 78790-07-5 HCPLUS
 CN Rhodium, chloro[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]bis(triphenylphosphine)-, (SP-4-2)- (CA INDEX NAME)



RN 78822-10-3 HCPLUS
 CN Platinum, dichloro[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine](triethylphosphine)-, (SP-4-1)- (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 78777-19-2P 78777-20-5P 78777-21-6P
 78777-23-8P 78777-26-1P 78777-34-1P
 78777-35-2P 78777-36-3P 78777-37-4P
 78778-33-3P 78784-52-8P 78784-53-9P
 78784-54-0P 78789-42-1P 78790-07-5P
 78822-10-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

L39 ANSWER 25 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1981:462349 HCPLUS Full-text

DOCUMENT NUMBER: 95:62349

ORIGINAL REFERENCE NO.: 95:10539a,10542a

TITLE: Synthesis and structure of pentacarbonyl(mesityldiphenylmethylenephosphine)chromium(0)

AUTHOR(S): Klebach, Theodorus C.; Lourens, Rimmer; Bickelhaupt, Friedrich; Stam, Casper H.; Van Herk, Alex

CORPORATE SOURCE: Vakgroep Org. Chem., Vrije Univ., Amsterdam,
 1081 HV, Neth.

SOURCE: Journal of Organometallic Chemistry (1981), 210(2), 211-21
 CODEN: JORCAI; ISSN: 0022-328X

DOCUMENT TYPE: Journal
 LANGUAGE: English

ED Entered STN: 12 May 1984

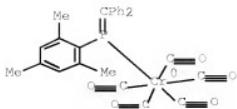
AB Mesityl(diphenylmethylene)phosphine (I), a stable all-C substituted phosphaalkene, reacts with Cr(CO)₅·THF to furnish the title compound II, a relatively air-stable complex. Spectral data suggest a close structural similarity between the free and the complexed ligand and indicate I to be a ligand of moderate basicity towards Cr. X-ray crystal and mol. structure determination showed the phosphaalkene moiety to be nearly planar with a typically short P:C bond length of 1.679(4) Å and a C-P-C bond angle of 109.8(2)°. From a discussion of the bond lengths, it is tentatively concluded that in II, I is a π-acceptor of intermediate strength.

IT 78506-28-2P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and crystal structure of)

RN 78506-28-2 HCPLUS

CN Chromium, pentacarbonyl[(diphenylmethylene)(2,4,6-trimethylphenyl)phosphine]-, (OC-6-22)- (CA INDEX NAME)

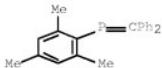


IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pentacarbonyl(tetrahydrofuran)chromium)

RN 67565-91-7 HCAPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 29-11 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 75

IT 78506-28-2B

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(preparation and crystal structure of)

IT 67565-91-7

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pentacarbonyl(tetrahydrofuran)chromium)

L39 ANSWER 26 OF 27 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1978:509798 HCAPLUS Full-text

DOCUMENT NUMBER: 89:109798

ORIGINAL REFERENCE NO.: 89:16933a,16936a

TITLE:

Synthesis of
mesityldiphenylmethylenephosphine: a stable
compound with a localized phosphorus:carbon
bond

AUTHOR(S): Kiebach, T. C.; Lourens, R.; Bickelhaupt, F.

CORPORATE SOURCE: Scheikd. Lab., Vrije Univ. Amsterdam,
Amsterdam, Neth.SOURCE: Journal of the American Chemical Society (1978), 100(15), 4886-8
CODEN: JACSAT; ISSN: 0002-7863

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 12 May 1984

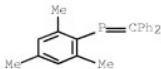
AB The reaction of RPC12 ($R = 2,4,6\text{-Me}_3\text{C}_6\text{H}_2$) with Ph₂CHLi gave RC₁PCHPh₂ which, on treatment with1,5-diazabicyclo[5.4.0]undec-5-ene, gave RP:Ph₂ in almost quant. yield. Addition of HCl to RP:Ph₂ yielded RC₁PCHPh₂ and MeONa catalyzed addition of MeOH to RP:Ph₂ gave R(MeO)PCHPh₂ indicating a polarization of the P:C bond with P as the pos. end.

IT 67565-91-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(preparation and spectral properties of)

RN 67565-91-7 HCAPLUS

CN Phosphine, (diphenylmethylene)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 29-7 (Organometallic and Organometalloidal Compounds)
 IT 67565-91-7P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (preparation and spectral properties of)

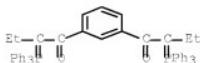
L39 ANSWER 27 OF 27 HCPLUS COPYRIGHT 2009 ACS on STN
 ACCESSION NUMBER: 1973:419154 HCPLUS Full-text
 DOCUMENT NUMBER: 79:19154
 ORIGINAL REFERENCE NO.: 79:3087a,3090a
 TITLE: Regiospecific 1,3-dipolar cycloaddition
 polymerization of keto-stabilized
 bisalkylidene phosphoranes with bisazides
 AUTHOR(S): Ykman, P.; L'Abbe, G.; Smets, G.
 CORPORATE SOURCE: Dep. Chem., Univ. Louvain, Heverlee, Belg.
 SOURCE: Journal of the Indian Chemical Society (1972), 49(12), 1245-50
 CODEN: JICSAH; ISSN: 0019-4522
 DOCUMENT TYPE:
 LANGUAGE: English
 ED Entered STN: 12 May 1984
 AB Thermostable poly(1,2,3-triazoles) [I, R = m- or p-C₆H₄, p-C₆H₄O-C₆H₄-p-; R₁ = Et, H; R₂ = m-C₆H₄, (CH₂)₃, or (CH₂)₆] were prepared by the regiospecific reaction of bisazides with keto-stabilized bisalkylidene phosphoranes in Me₂SO. All the polymers contained terminal ylide functions, and most (especially the lower mol. weight fractions) contained azide functions. I were prepared in 86-99% yield in 1-5 days at 80-100.deg.; e.g., 98% p,p'-diazidodiphenyl ether-1,6-bis(triphenylphosphoranylidene-2,6-heptanedione copolymer [I, R = p-C₆H₄O-C₆H₄-p, R₁ = H, R₂ = (CH₂)₃] [40715-84-2] was prepared after 36 hr at 80.deg.. The bisylides were prepared by treating bisacyl chlorides with 4 equivalent alkylidene phosphoranes in benzene, or by treating 4 equivalent alkylidene phosphoranes in benzene, or by treating bisthio esters with 2 equivalent of alkylidene phosphoranes in refluxing PhMe.

IT 41900-78-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, regiospecific)
 RN 41900-78-1 HCPLUS
 CN 1-Butanone, 1,1'-(1,3-phenylene)bis[2-(triphenylphosphoranylidene)-, polymer with 1,4-diazidobenzene (9CI) (CA INDEX NAME)

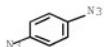
CM 1

CRN 41726-53-8

CMF C₅₀ H₄₄ O₂ P₂



CM 2

CRN 2294-47-5
CMF C6 H4 N6

CC 35-3 (Synthetic High Polymers)
Section cross-reference(s): 29
IT 40715-84-2P 41900-78-1P 41900-79-2P 41900-80-5P
41900-82-7P 41900-83-8P 41900-84-9P 41909-45-9P
41909-46-0P 41909-47-1P 41909-48-2P 41909-49-3P
41909-50-6P 41909-51-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, regiospecific)

FULL SEARCH HISTORY

=> d his nofile

(FILE 'HOME' ENTERED AT 14:20:57 ON 23 APR 2009)

FILE 'HCAPLUS' ENTERED AT 14:21:26 ON 23 APR 2009
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L1 1 SEA SPE=ON ABB=ON PLU=ON US20060270805/PN
D ALL
SEL RN

L2 FILE 'REGISTRY' ENTERED AT 14:22:39 ON 23 APR 2009
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10544-50-0/B1 OR 109-72-8/B1 OR 119-61-9/B1 OR
14044-65-6/B1 OR 2094-98-6/B1 OR 334992-56-2/B1 OR
501418-47-9/B1 OR 591-51-5/B1 OR 67565-91-7/B1 OR
68357-99-3/B1 OR 713542-93-9/B1 OR 713542-95-1/B1 OR
713542-97-3/B1 OR 713542-99-5/B1 OR 713543-00-1/B1 OR
713543-01-2/B1 OR 713543-02-3/B1 OR 713543-03-4/B1 OR
7722-84-1/B1 OR 917-54-4/B1)
D SCA

FILE 'STNGUIDE' ENTERED AT 14:23:02 ON 23 APR 2009

L3 FILE 'REGISTRY' ENTERED AT 14:25:35 ON 23 APR 2009
12 SEA SPE=ON ABB=ON PLU=ON L2 AND P/ELS
D SCA
L4 9 SEA SPE=ON ABB=ON PLU=ON L2 AND PMS/CI
D SCA
L5 9 SEA SPE=ON ABB=ON PLU=ON L3 AND L4
L6 3 SEA SPE=ON ABB=ON PLU=ON L3 NOT L4
D SCA

FILE 'STNGUIDE' ENTERED AT 14:28:13 ON 23 APR 2009
D SCA L5

FILE 'REGISTRY' ENTERED AT 14:56:36 ON 23 APR 2009
D SCA L5

L7 FILE 'LREGISTRY' ENTERED AT 14:56:53 ON 23 APR 2009
STR

L8 FILE 'REGISTRY' ENTERED AT 14:58:35 ON 23 APR 2009
50 SEA SSS SAM L7

FILE 'REGISTRY' ENTERED AT 14:59:02 ON 23 APR 2009

L9 FILE 'LREGISTRY' ENTERED AT 14:59:04 ON 23 APR 2009
STR L7

L10 FILE 'REGISTRY' ENTERED AT 14:59:33 ON 23 APR 2009
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L11 1 SEA SPE=ON ABB=ON PLU=ON L2 AND *(C22 H21 P . C5 H8
O2)X"/MF
D
E 67565-91-7/RN
L12 1 SEA SPE=ON ABB=ON PLU=ON 67565-91-7/RN
D SCA

L13 FILE 'LREGISTRY' ENTERED AT 15:03:10 ON 23 APR 2009
STR 67565-91-7

FILE 'REGISTRY' ENTERED AT 15:03:38 ON 23 APR 2009
D QUE STAT L10
E STYRENE/CN

10/539,397-292586-EIC SEARCH

L14 1 SEA SPE=ON ABB=ON PLU=ON STYRENE/CN
 D
L15 81738 SEA SPE=ON ABB=ON PLU=ON 100-42-5/CRN

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L16 STR

FILE 'REGISTRY' ENTERED AT 15:12:01 ON 23 APR 2009
L17 50 SEA SSS SAM L16

FILE 'LREGISTRY' ENTERED AT 15:13:28 ON 23 APR 2009
L18 STR L16

FILE 'REGISTRY' ENTERED AT 15:18:10 ON 23 APR 2009
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L20 10 SEA SPE=ON ABB=ON PLU=ON L2 AND L19
 D QUE L18
L21 0 SEA SUB=L19 SSS SAM L18
L22 2 SEA SUB=L19 SSS FUL L18
 D SCA
 D L22 1-2 RN
L23 1 SEA SPE=ON ABB=ON PLU=ON 89982-81-0/RN
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L24 0 SEA SPE=ON ABB=ON PLU=ON 89982-81-0/CRN
L25 1 SEA SPE=ON ABB=ON PLU=ON 89982-79-6/RN
 D
 D CRN
L26 0 SEA SPE=ON ABB=ON PLU=ON 89982-79-6/CRN
 SAV TEMP L19 PEZ397REG/A
L27 2 SEA SPE=ON ABB=ON PLU=ON L19 AND L15
 SAV TEMP L27 PEZ397REGA/A
 D QUE STAT L22
 SAV TEMP L2 PEZ397REGB/A
 D QUE STAT
 D QUE STAT L17
 D QUE STAT L18
L28 0 SEA SUB=L19 SSS SAM L18
 D QUE STAT

FILE 'LREGISTRY' ENTERED AT 15:28:00 ON 23 APR 2009
L29 STR L18

FILE 'REGISTRY' ENTERED AT 15:28:36 ON 23 APR 2009
L30 2 SEA SUB=L19 SSS SAM L29
L31 42 SEA SUB=L19 SSS FUL L29
L32 2 SEA SPE=ON ABB=ON PLU=ON L22 AND L19
 D SCA
L33 15 SEA SPE=ON ABB=ON PLU=ON L19 AND PMS/CI
L34 50 SEA SPE=ON ABB=ON PLU=ON L27 OR (L31 OR L32 OR L33)

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L35 40 SEA SPE=ON ABB=ON PLU=ON L34
L36 1 SEA SPE=ON ABB=ON PLU=ON L1 AND L35
L37 QUE SPE=ON ABB=ON PLU=ON PY=<2003 NOT P/DT
L38 QUE SPE=ON ABB=ON PLU=ON (PY=<2003 OR PRY=<2003 OR
 AY=<2003 OR MY=<2003 OR REVIEW/DT) AND P/DT
L39 27 SEA SPE=ON ABB=ON PLU=ON L35 AND (L37 OR L38)
 D QUE L27
 SAV TEMP L39 PEZ397HCP/A
 D QUE STAT L39
 D L39 1-27 IBIB ED ABS HITSTR HITIND